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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27	Oct 21	EVENTLINE has been reloaded
NEWS 28	Oct 24	BEILSTEIN adds new search fields
NEWS 29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS 31	Nov 18	DKILIT has been renamed APOLLIT
NEWS 32	Nov 25	More calculated properties added to REGISTRY
NEWS 33	Dec 02	TIBKAT will be removed from STN
NEWS 34	Dec 04	CSA files on STN
NEWS 35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36	Dec 17	TOXCENTER enhanced with additional content
NEWS 37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 38	Dec 30	ISMEC no longer available
NEWS 39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 40	Jan 21	NUTRACEUT offering one free connect hour in February 2003
NEWS 41	Jan 21	PHARMAML offering one free connect hour in February 2003
NEWS 42	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 43	Feb 13	CANCERLIT is no longer being updated
NEWS 44	Feb 24	METADEX enhancements
NEWS 45	Feb 24	PCTGEN now available on STN

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 NEWS 46   Feb 24   TEMA now available on STN
 NEWS 47   Feb 26   NTIS now allows simultaneous left and right truncation
 NEWS 48   Feb 26   PCTFULL now contains images

 NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
               CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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FULL ESTIMATED COST                                       0.21       0.21

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FILE 'CANCERLIT' ENTERED AT 11:11:19 ON 04 MAR 2003

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=> s (kozarov-E? or progulske-a? or progulske-fox-a?)/au
L1          226 (KOZAROV-E? OR PROGULSKE-A? OR PROGULSKE-FOX-A?)/AU

=> s l1 and gingivalis
L2          112 L1 AND GINGIVALIS

=> s l2 and angio? or neovas?
L3        58378 L2 AND ANGIO? OR NEOVAS?

=> s l2 and (angio? or neovas?)
L4            0 L2 AND (ANGIO? OR NEOVAS?)

=> s l2 and (?carcinoma or cancer? or neoplas? or tumor? or metast?)
   2 FILES SEARCHED...
L5            0 L2 AND (?CARCINOMA OR CANCER? OR NEOPLAS? OR TUMOR? OR METAST?)
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=> s l2 and (HagA or Hemag?)
L6 68 L2 AND (HAGA OR HEMAG?)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 38 DUP REM L6 (30 DUPLICATES REMOVED)

=> s l7 and anti?
2 FILES SEARCHED...
L8 13 L7 AND ANTI?

=> d ibib abs 1-38 l7

L7 ANSWER 1 OF 38 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 2001:396093 SCISEARCH
THE GENUINE ARTICLE: 430HD
TITLE: The effect of monoclonal antibody and route of immunization on the humoral immune response against Porphyromonas **gingivalis**
AUTHOR: van Tilburg M L J A; **Kozarov E V**; **Progulske-Fox A**; Brady L J (Reprint)
CORPORATE SOURCE: Univ Florida, Dept Oral Biol, JHMHC Box 100424, Gainesville, FL 32610 USA (Reprint); Univ Florida, Dept Oral Biol, Gainesville, FL 32610 USA
COUNTRY OF AUTHOR: USA
SOURCE: ORAL MICROBIOLOGY AND IMMUNOLOGY, (JUN 2001) Vol. 16, No. 3, pp. 153-162.
Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK.
ISSN: 0902-0055.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 51
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Immunomodulation mediated by exogenous antibodies has been proposed as a vaccine strategy to improve immune protection against pathogenic microorganisms and suggested to contribute to protection following passive immunization. To test whether a monoclonal antibody directed against an adhesion epitope of the periodontal pathogen Porphyromonas **gingivalis** could influence the humoral immune response following mucosal immunization, BALB/c mice were immunized orally or intranasally with P, **gingivalis** alone or P. **gingivalis** coated with monoclonal antibody 61BG1.3. Differences in antigenic specificity of anti-P., **gingivalis** serum immunoglobulin G (IgG) were demonstrated between groups of mice that received monoclonal antibody-coated P. **gingivalis** versus those that received P. **gingivalis** alone by either route of immunization. Binding of monoclonal antibody 61BG1.3 to P. **gingivalis** prior to immunization did not influence the serum IgG subclass distribution. However, minor differences in subclass distribution were observed between the various routes of mucosal immunization. These results support the hypothesis that specific monoclonal antibody bound to a bacterial vaccine can alter the quality of the humoral immune response to that organism.

L7 ANSWER 2 OF 38 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2000316075 MEDLINE
DOCUMENT NUMBER: 20316075 PubMed ID: 10858264
TITLE: Long-term immunological memory induced by recombinant oral Salmonella vaccine vectors.
AUTHOR: Kohler J J; Pathangey L; Hasona A; **Progulske-Fox A**; Brown T A
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville, Florida 32610, USA.
CONTRACT NUMBER: DE-07200 (NIDCR)

DE-07496 (NIDCR)
DE-10963 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (2000 Jul) 68 (7) 4370-3.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000728
Last Updated on STN: 20000728
Entered Medline: 20000720

AB We have previously shown that Salmonella enterica serovar Typhimurium expressing the hagB **hemagglutinin** gene from Porphyromonas **gingivalis** can induce primary and recall immune responses in serum and secretions in mice; however, the longevity of memory induced by oral Salmonella carriers has not been adequately demonstrated. In this study, we examined the capacity of mice to mount a recall response 52 weeks after primary immunization. Recall responses were seen in serum immunoglobulin G (IgG) and IgA following boosting at week 52, and in most cases, they were equal to or greater than the primary responses. Significant mucosal IgA recall responses in saliva and vaginal wash were also detected following boosting at week 52. In addition, there was a considerable residual response in secretions at week 51, prior to boosting. These results indicate that oral Salmonella vectors can induce long-term memory to recombinant HagB and are particularly effective at inducing long-lasting mucosal responses as well as at inducing the capacity for mucosal recall responses.

L7 ANSWER 3 OF 38 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 2000:164400 SCISEARCH
THE GENUINE ARTICLE: 277MH
TITLE: Expression, purification, immunological and functional properties of recombinant **hemagglutinin** A from Porphyromonas **gingivalis**
AUTHOR: **Kozarov E (Reprint)**; Nowacki C; ProgulskePox A
CORPORATE SOURCE: UNIV FLORIDA, DEPT ORAL BIOL, GAINESVILLE, FL 32610
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF DENTAL RESEARCH, (15 FEB 2000) Vol. 79, Sp. iss. SI, pp. 2005-2005.
Publisher: AMER ASSOC DENTAL RESEARCH, 1619 DUKE ST, ALEXANDRIA, VA 22314.
ISSN: 0022-0345.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L7 ANSWER 4 OF 38 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000107078 MEDLINE
DOCUMENT NUMBER: 20107078 PubMed ID: 10639440
TITLE: Expression and immunogenicity of **hemagglutinin** A from Porphyromonas **gingivalis** in an avirulent Salmonella enterica serovar typhimurium vaccine strain.
AUTHOR: **Kozarov E**; Miyashita N; Burks J; Cerveny K; Brown T A; McArthur W P; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology and the Periodontal Disease Research Center, University of Florida, Gainesville, Florida 32610, USA.. kozarov@dental.ufl.edu
CONTRACT NUMBER: DE07496 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (2000 Feb) 68 (2) 732-9.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000218
Last Updated on STN: 20000218
Entered Medline: 20000210

AB Porphyromonas **gingivalis** is a major etiologic agent of periodontitis, a chronic inflammatory disease that ultimately results in the loss of the supporting tissues of the teeth. Previous work has demonstrated the usefulness of avirulent Salmonella enterica serovar Typhimurium strains as antigen delivery systems for protective antigens of pathogens that colonize or cross mucosal surfaces. In this study, we constructed and characterized a recombinant S. enterica serovar Typhimurium avirulent vaccine strain which expresses **hemagglutinin** A and carries no antibiotic resistance markers. **HagA**, a major virulence-associated surface protein, is a potentially useful immunogen that contains an antigenic epitope which, in humans, elicits an immune response that is protective against subsequent colonization by P. **gingivalis**. The **hagA** gene, including its promoter, was cloned into a balanced-lethal Salmonella vector and transferred to the vaccine strain. Heterologous expression of **HagA** was demonstrated in both Escherichia coli JM109 and S. enterica serovar Typhimurium vaccine strain chi4072. The **HagA** epitope was present in its native configuration as determined by immunochemistry and immunoelectron microscopy. Purified recombinant **HagA** was recognized by sera from mice immunized with the S. enterica serovar Typhimurium vaccine strain. The **HagA**-specific antigen of the vaccine was also found to be recognized by serum from a periodontal patient. This vaccine strain, which expresses the functional **hemagglutinin** protein, induces a humoral immune response against **HagA** and may be useful for developing a protective vaccine against periodontal diseases associated with P. **gingivalis**.

L7 ANSWER 5 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:349917 BIOSIS
DOCUMENT NUMBER: PREV200000349917
TITLE: Both **HagA** and HagB **hemagglutinins** of Porphyromonas **gingivalis** act as adhesins for invasion of HCAEC.
AUTHOR(S): Dorn, B. R. (1); **Kozarov, E. V. (1)**; Harris, L. J. (1); Whitlock, J. A. (1); **Progulske-Fox, A. (1)**
CORPORATE SOURCE: (1) University of Florida, Gainesville, FL USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2000) Vol. 100, pp. 70. print. Meeting Info.: 100th General Meeting of the American Society for Microbiology Los Angeles, California, USA May 21-25, 2000 American Society for Microbiology . ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L7 ANSWER 6 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:345558 BIOSIS
DOCUMENT NUMBER: PREV200000345558
TITLE: Receptors for **hemagglutinin** A from Porphyromonas **gingivalis** on human endothelial and epithelial cells.
AUTHOR(S): **Kozarov, E. V. (1)**; Song, Y. H.; **Progulske-Fox, A. (1)**
CORPORATE SOURCE: (1) University of Florida, Gainesville, FL USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2000) Vol. 100, pp. 70. print. Meeting Info.: 100th General Meeting of the American

Society for Microbiology Los Angeles, California, USA May 21-25, 2000 American Society for Microbiology . ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L7 ANSWER 7 OF 38 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2000149628 MEDLINE
DOCUMENT NUMBER: 20149628 PubMed ID: 10685367
TITLE: Porphyromonas **gingivalis** virulence factors and invasion of cells of the cardiovascular system.
AUTHOR: **Progulske-Fox A**; **Kozarov E**; Dorn B; Dunn W Jr; Burks J; Wu Y
CORPORATE SOURCE: University of Florida, Department of Oral Biology, Gainesville 32606, USA.. apfox@dental.ufl.edu
SOURCE: JOURNAL OF PERIODONTAL RESEARCH, (1999 Oct) 34 (7) 393-9. Journal code: 0055107. ISSN: 0022-3484.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000323

AB Our laboratory is interested in the genes and gene products involved in the interactions between Porphyromonas **gingivalis** (Pg) and the host. These interactions may occur in either the periodontal tissues or other non-oral host tissues such as those of the cardiovascular system. We have previously reported the cloning of several genes encoding **hemagglutinins**, surface proteins that interact with the host tissues, and are investigating their roles in the disease process. Primary among these is **HagA**, a very large protein with multiple functional groups that have significant sequence homology to protease genes of this species. Preliminary evidence indicates that an avirulent Salmonella typhimurium strain containing **hagA** is virulent in mice. These data indicate that **HagA** may be a key virulence factor of Pg. Additionally, we are investigating the invasion of primary human coronary artery endothelial cells (HCAEC) by Pg because of the recent epidemiological studies indicating a correlation between periodontal disease (PD) and coronary heart disease (CHD). We found that some, but not all, strains of Pg are able to invade these cells. Scanning electron microsopy of the infected HCAEC demonstrated that the invading organisms initially attached to the host cell surface as aggregates and by a "pedestal"-like structure. By transmission electronmicroscopy it could be seen that internalized bacteria were present within multimembranous compartments localized with rough endoplasmic reticulum. In addition, invasion of the HCAEC by Pg resulted in an increase in the degradation of long-lived cellular proteins. These data indicate that Pg are present within autophagosomes and may use components of the autophagic pathway as a means to survive intracellularly. However, Pg presence within autophagosomes in KB cells could not be observed or detected. It is therefore likely that Pg uses different invasive mechanisms for different host cells. This and the role of **HagA** in invasion is currently being investigated further.

L7 ANSWER 8 OF 38 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1998427134 MEDLINE
DOCUMENT NUMBER: 98427134 PubMed ID: 9746569
TITLE: The number of direct repeats in **hagA** is variable among Porphyromonas **gingivalis** strains.
AUTHOR: **Kozarov E**; Whitlock J; Dong H; Carrasco E; **Progulske-Fox A**

CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville, Florida 32610,. USA.kozarov@dental.ufl.edu
CONTRACT NUMBER: DE07496 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1998 Oct) 66 (10) 4721-5. Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 20000303
Entered Medline: 19981029

AB The coding sequence for the surface protein **hemagglutinin** A (**HagA**) of Porphyromonas **gingivalis** 381 has previously been shown to contain four direct 1.35-kb repeats, designated repHA. This study was performed to determine if the number of repHA units in **hagA** is consistently 4 or if allelic polymorphism exists among strains and/or upon multiple passage of P. **gingivalis**. To this end, primers which were homologous to the regions directly 5' and 3' of the repeat domain in **hagA** were synthesized. PCR conditions which allowed amplification of the 8.4-kb repeat region between the primers in P. **gingivalis** 381 were established. Genomic DNA templates from 13 other P. **gingivalis** strains and 9 fresh clinical isolates from patients were analyzed under the same conditions as used above. Analysis of these PCR products demonstrated that the strains tested had different numbers (two to four) of repHA units in the respective **hagA** genes. The PCR products of 8.4, 7.0, and 5.7 kb represent four, three, and two repeats, respectively. One strain from each group (381, four repeats; W83, three repeats; and AJW4, two repeats) was also tested to determine if the number of repeats remained invariant upon passaging onto solid medium. No variability in the number of repeats in **hagA** within a strain was detected after 18 passages. P. **gingivalis** 381 was chosen for further testing in a mouse abscess model to determine if conditions of in vivo growth would select for deletions or duplications of the repeated sequences. Five days after infection, no change in the number of repeats was detected in cells recovered from either nonimmunized or preimmunized mice. This data indicates an interstrain variability of the number of repeat units and hence a size variability of the **HagA** protein of P. **gingivalis**, but unlike some surface antigens of other pathogenic species, the number of repeats remains relatively stable given the conditions of growth tested here.

L7 ANSWER 9 OF 38 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 1998:411254 SCISEARCH
THE GENUINE ARTICLE: ZK546
TITLE: Expression of **hemagglutinin** a from Porphyromonas **gingivalis** in Escherichia coli and in a avirulent vaccine strain of Salmonella typhimurium
AUTHOR: Miyashita N (Reprint); **Kozarov E V**; Burks J N; ProgulskeFox A
CORPORATE SOURCE: UNIV FLORIDA, GAINESVILLE, FL
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF DENTAL RESEARCH, (APR 1998) Vol. 77, Sp. iss. B, pp. 1789-1789.
Publisher: AMER ASSOC DENTAL RESEARCH, 1619 DUKE ST, ALEXANDRIA, VA 22314.
ISSN: 0022-0345.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L7 ANSWER 10 OF 38 SCISEARCH COPYRIGHT 2003 ISI (R)
ACCESSION NUMBER: 1998:411253 SCISEARCH
THE GENUINE ARTICLE: ZK546
TITLE: Porphyromonas **gingivalis** hagB/C **hemagglutinin** mutant exhibits reduced invasion of human oral epithelial cells.
AUTHOR: Whitlock J A (Reprint); Dorn B R; Burks J N; **Kozarov E V**; ProgulskeFox A
CORPORATE SOURCE: UNIV FLORIDA, GAINESVILLE, FL
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF DENTAL RESEARCH, (APR 1998) Vol. 77, Sp. iss. B, pp. 1787-1787.
Publisher: AMER ASSOC DENTAL RESEARCH, 1619 DUKE ST, ALEXANDRIA, VA 22314.
ISSN: 0022-0345.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L7 ANSWER 11 OF 38 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 1999138114 MEDLINE
DOCUMENT NUMBER: 99138114 PubMed ID: 9972167
TITLE: The porphyromonas **gingivalis** prtP/kgp homologue exists as two open reading frames in strain 381.
AUTHOR: Han N; Lepine G; Whitlock J; Wojciechowski L; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville 32610-0424, USA.
CONTRACT NUMBER: DE 00336 (NIDCR)
DE 07496 (NIDCR)
SOURCE: ORAL DISEASES, (1998 Sep) 4 (3) 170-9.
Journal code: 9508565. ISSN: 1354-523X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
OTHER SOURCE: GENBANK-U68468
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990301
Last Updated on STN: 20000303
Entered Medline: 19990218

AB P. **gingivalis** is considered to be a major pathogen of adult periodontitis. Among its cadre of putative virulence factors are **hemagglutinins** (adhesins) and proteases. We here report the cloning, sequencing and characterization of two genes, designated kgp(381) and hagD. Kgp(381), an open reading frame (ORF) of 1095 bp encoding a 40.1 kda protein, has high homology to the proteolytic domain of cysteine protease/**hemagglutinin** genes. HagD, an ORF of 4077 bp encoding a 147.1 kda protein, contains one HArep sequence which establishes it as an additional member of the HArep multigene family. Although similar in sequence to kgp and prtP which were identified from strains HG66 and W12, respectively, the kgp(381)-hagD genes have several characteristics which distinguish them from kgp and prtP. Foremost among these is a single base difference which produces a termination codon and an immediate frame shift resulting in two ORFs in strain 381 as compared to one ORF in strains HG66 and W12. In addition, a 172 amino acid sequence near the C-terminal end of hagD has very low identity (20.5-27.8%) to the corresponding region of kgp and prtP. These demonstrate that the homologue of kgp and prtP in strain 381 occurs as two separate genes which may genetically separate the adhesive and enzymatic domains of Kgp and PrtP proteins. Reverse polymerase chain reaction (PCR) analysis indicates that hagD expression is regulated by hemin concentration.

L7 ANSWER 12 OF 38 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 97045177 MEDLINE
DOCUMENT NUMBER: 97045177 PubMed ID: 8890242
TITLE: The **hemagglutinin** genes hagB and hagC of Porphyromonas **gingivalis** are transcribed in vivo as shown by use of a new expression vector.
AUTHOR: Lee S W; Hillman J D; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, College of Dentistry, University of Florida, Gainesville 32610, USA.
CONTRACT NUMBER: DE00336 (NIDCR)
DE07496 (NIDCR)
DE10994 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1996 Nov) 64 (11) 4802-10.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 20000303
Entered Medline: 19970106

AB The **hemagglutinin** genes hagB and hagC of Porphyromonas **gingivalis**, a putative periodontopathic microorganism, have been cloned, sequenced, and characterized. However, the roles of these putative virulence genes have not yet been determined. In this study, an in vivo expression technology vector termed pPGIVET was constructed and used to determine if hagB and hagC were expressed during an infectious process. We constructed pPGIVET as a conjugative suicide plasmid containing a multiple-cloning site (MCS) upstream of two tandem promoterless reporter genes that encode tetracycline resistance [tetA(Q)2] and galactokinase (galK). The promoter and a portion of the open reading frame (ORF) of hagB were inserted into the MCS in both a positive and a negative orientation relative to the reporter genes. These constructs were conjugated into P. **gingivalis** 381. Southern blot analysis of different transconjugants indicated that Campbell insertions had occurred at the chromosomal hagB locus and also at the hagC locus, which has high (99%) homology to the ORF of hagB. pPGIVET-labeled clones in which the hag promoters were positively oriented relative to the reporter genes expressed tetracycline resistance and galactokinase activity in vitro and in vivo at significantly higher levels than did the wild-type strain or clones in which the hag promoters were negatively oriented. Expression of tetracycline resistance allowed substantial enrichment of heterodiploids over wild-type cells during a mixed infection in the mouse abscess model. These results indicate that hagB and hagC are transcriptionally active in vivo and suggested that pPGIVET may be used to isolate P. **gingivalis** genes expressed only during an infectious process.

L7 ANSWER 13 OF 38 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 97047672 MEDLINE
DOCUMENT NUMBER: 97047672 PubMed ID: 8926061
TITLE: The **hemagglutinin** gene A (**hagA**) of Porphyromonas **gingivalis** 381 contains four large, contiguous, direct repeats.
AUTHOR: Han N; Whitlock J; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville 32610-0424, USA.. nhan@dental.ufl.edu
CONTRACT NUMBER: DE 00336 (NIDCR)
DE 07496 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1996 Oct) 64 (10) 4000-7.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U41807
ENTRY MONTH: 199611
ENTRY DATE: Entered STN: 19961219
Last Updated on STN: 20000303
Entered Medline: 19961114

AB Porphyromonas **gingivalis** is a gram-negative anaerobic bacterial species strongly associated with adult periodontitis. One of its distinguishing characteristics and putative virulence properties is the ability to agglutinate erythrocytes. We have previously reported the cloning of multiple **hemagglutinin** genes from P. **gingivalis** 381. Subsequent sequencing of clone ST 2 revealed that the cloned fragment contained only an internal portion of the gene which lacked both start and stop codons. We here report the cloning and sequencing of the entire gene, designated **hagA**, as well as its relationship to other genes of this species. By use of inverse PCR technology and the construction of several additional genomic libraries, the complete open reading frame of **hagA** was found to be 7,887 bp in length, encoding a protein of 2,628 amino acids with a molecular mass of 283.3 kDa, which is among the largest genes ever cloned from a prokaryote to date. Within its open reading frame, four large, contiguous, direct repeats (varying from 1,318 to 1,368 bp) were identified. The repeat unit (HArep), which is assumed to contain the **hemagglutinin** domain, is also present in other recently reported protease and **hemagglutinin** genes in P. **gingivalis**. Thus, we propose that **hagA** and the other genes which share the HArep sequence form a multigene family with **hagA** as a central member.

L7 ANSWER 14 OF 38 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 96213011 MEDLINE
DOCUMENT NUMBER: 96213011 PubMed ID: 8631659
TITLE: Analysis of the prtP gene encoding porphypain, a cysteine proteinase of Porphyromonas **gingivalis**.
AUTHOR: Barkocy-Gallagher G A; Han N; Patti J M; Whitlock J; **Progulske-Fox A**; Lantz M S
CORPORATE SOURCE: Indiana University School of Dentistry, Indianapolis, Indiana 46202, USA.
CONTRACT NUMBER: DE00336 (NIDCR)
DE07256-13 (NIDCR)
DE07496 (NIDCR)
SOURCE: JOURNAL OF BACTERIOLOGY, (1996 May) 178 (10) 2734-41.
Journal code: 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U42210
ENTRY MONTH: 199607
ENTRY DATE: Entered STN: 19960715
Last Updated on STN: 20000303
Entered Medline: 19960702

AB The cloning and sequencing of the gene encoding porphypain, a cysteine proteinase previously isolated from detergent extracts of the Porphyromonas **gingivalis** W12 cell surface, are described. The prtP gene encoded a unique protein of 1,732 amino acids, including a putative signal sequence for protein secretion. The predicted molecular mass for the mature protein was 186 kDa, which was close to the observed molecular mass of 180 kDa. There was one copy of prtP in the genomes of seven P. **gingivalis** strains examined. The gene was located 5' to a region with a high degree of homology to the insertion element IS1126 in P. **gingivalis** W12. The PrtP protein had regions of high homology to **HagA**, a **hemagglutinin** of P. **gingivalis**, and to several purported proteinases of P. **gingivalis** that have Arg-X specificity. A detailed comparison of genes encoding the latter and

cpgR suggested that rgp-1, prpR1, prtR, agp, cpgR, and possibly prtH were derived from identical genetic loci. Although an rgp-1-like locus was detected in seven P. **gingivalis** strains by Southern blot analyses, agp and cpgR were not detected, not even in the strains from which they were originally isolated. In addition, at least 20 copies of a repeat region common to PrtP, the Rgp-1-like proteins, and **HagA** were observed in each of the seven genomes examined. The repeat region hybridization patterns for strains W83 and W50 were very similar, and they were identical for strains 381 and ATCC 33277, providing further evidence that these strains are closely related genetically.

L7 ANSWER 15 OF 38 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 96178649 MEDLINE
DOCUMENT NUMBER: 96178649 PubMed ID: 8606121
TITLE: Construction and preliminary characterization of three **hemagglutinin** mutants of Porphyromonas **gingivalis**.
AUTHOR: Lepine G; Ellen R P; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, College of Dentistry, University of Florida, Gainesville, Florida 32610, USA.
CONTRACT NUMBER: DE00336 (NIDCR)
DE07496 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1996 Apr) 64 (4) 1467-72.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199605
ENTRY DATE: Entered STN: 19960531
Last Updated on STN: 20000303
Entered Medline: 19960523
AB Targeted insertional mutagenesis was used to construct **hagA**, hagB, and hagC **hemagglutinin** mutants of Porphyromonas **gingivalis**. pJRD215-derived plasmids containing tetA(Q)2 and portions of the targeted genes were conjugated into P. **gingivalis** . Interruption of the three loci was confirmed by Southern hybridization, sequencing, reverse transcription-PCR, and microtiter **hemagglutination** assays. No significant differences in hydrophobicity or coadherence to Actinomyces viscosus were detected between the mutants and the wild-type strain.

L7 ANSWER 16 OF 38 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 97096936 MEDLINE
DOCUMENT NUMBER: 97096936 PubMed ID: 8941757
TITLE: Duplication and differential expression of **hemagglutinin** genes in Porphyromonas **gingivalis**.
AUTHOR: Lepine G; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, College of Dentistry, University of Florida, Gainesville, USA.
CONTRACT NUMBER: DE07496 (NIDCR)
SOURCE: ORAL MICROBIOLOGY AND IMMUNOLOGY, (1996 Apr) 11 (2) 65-78.
Journal code: 8707451. ISSN: 0902-0055.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
OTHER SOURCE: GENBANK-Z27394
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 20000303
Entered Medline: 19970114
AB A third **hemagglutinin** gene, defined as hagC, was cloned from

Porphyromonas **gingivalis** 381 and sequenced. This gene was found to encode a protein highly homologous (98.6%) to the previously reported HagB **hemagglutinin** protein. The upstream and downstream regions of hagB and hagC were found to share less than 40% homology compared with 99% for their open reading frames. The antigenic relationship between the two **hemagglutinins** was demonstrated by Western blot analysis. When expressed in an in vitro transcription-translation system, both genes encoded a protein with a molecular mass of 49 kDa. As determined by reverse transcription polymerase chain reaction, the steady-state levels of hagB and hagC mRNAs were found to vary according to the growth phase and hemin concentration. The amount of transcripts decreased in hemin-limited conditions or in the absence of hemin. Furthermore, hagB mRNAs were detected in the early logarithmic growth phase compared with the hagC transcripts, which were detected only in the mid-exponential phase of growth.

L7 ANSWER 17 OF 38 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 96001703 MEDLINE
DOCUMENT NUMBER: 96001703 PubMed ID: 7502765
TITLE: Expression and immunogenicity of a cloned Porphyromonas **gingivalis hemagglutinin** in Salmonella typhimurium.
AUTHOR: Dusek D M; **Progulske-Fox A**; Brown T A
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville, USA.
CONTRACT NUMBER: DE00236 (NIDCR)
DE07117 (NIDCR)
DE07496 (NIDCR)
+
SOURCE: ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, (1995) 371B 1119-21.
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199601
ENTRY DATE: Entered STN: 19960217
Last Updated on STN: 20000303
Entered Medline: 19960116

L7 ANSWER 18 OF 38 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 96179248 MEDLINE
DOCUMENT NUMBER: 96179248 PubMed ID: 8596675
TITLE: The cloning, expression and sequence analysis of a second Porphyromonas **gingivalis** gene that codes for a protein involved in **hemagglutination**.
AUTHOR: **Progulske-Fox A**; Tumwasorn S; Lepine G; Whitlock J; Savett D; Ferretti J J; Banas J A
CORPORATE SOURCE: Department of Oral biology, College of Dentistry, University of Florida, Gainesville, USA.
CONTRACT NUMBER: DE00336 (NIDCR)
DE005545 (NIDCR)
DE007496 (NIDCR)
SOURCE: ORAL MICROBIOLOGY AND IMMUNOLOGY, (1995 Oct) 10 (5) 311-8.
Journal code: 8707451. ISSN: 0902-0055.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
OTHER SOURCE: GENBANK-Z35494
ENTRY MONTH: 199604
ENTRY DATE: Entered STN: 19960424
Last Updated on STN: 20000303

Entered Medline: 19960418

AB It has been suggested that Porphyromonas **gingivalis** may possess more than one **hemagglutinin**. We have previously reported the cloning of a gene (**hagA**) that encodes a **hemagglutinin**. In this study we report the cloning, characterization, and sequencing of a second gene (hagB) that encodes a protein that also appears to be involved in **hemagglutination**. Antiserum to the clone (ST 7) was found to inhibit **hemagglutination** by P. **gingivalis** 381, and **hemagglutinating** inhibition activity of anti-P. **gingivalis** antiserum was reduced by adsorption of the antiserum with cells of clone ST 7. Restriction mapping and Southern analysis indicates there is little or no DNA homology between this cloned 4.8-kb HindIII DNA fragment and a cloned **hemagglutinin** gene we have previously described. Minicell analysis of the cloned P. **gingivalis** chromosomal DNA fragment revealed that the major gene product is a 49-kDa protein. Immunoaffinity chromatography using purified rabbit immunoglobulin G against the cloned protein resulted in the purification of a major reactive 49- to 50-kDa protein from a P. **gingivalis** cell lysate. Nucleotide sequence analysis revealed the hagB open reading frame to be 1053 nucleotides in length with a mol% G+C of 59.9% coding for a protein of 350 residues with a calculated molecular weight of 39.375 kDa. This protein was also determined to be basic and hydrophilic and to contain a potential signal peptide. Comparison of both the nucleotide and derived amino acid sequences with computer-based databases did not reveal any significant homologies between habB and any other previously sequenced genes.

L7 ANSWER 19 OF 38 MEDLINE DUPLICATE 13

ACCESSION NUMBER: 95372118 MEDLINE
DOCUMENT NUMBER: 95372118 PubMed ID: 7644268
TITLE: Restriction fragment length polymorphism analysis of two **hemagglutinin** loci, serotyping and agglutinating activity of Porphyromonas **gingivalis** isolates.
AUTHOR: Savett D A; **Progulske-Fox A**
CORPORATE SOURCE: Department of Oral Biology, College of Dentistry, University of Florida, Gainesville 32610-0424, USA.
CONTRACT NUMBER: DE07496 (NIDCR)
SOURCE: ORAL MICROBIOLOGY AND IMMUNOLOGY, (1995 Feb) 10 (1) 1-7. Journal code: 8707451. ISSN: 0902-0055.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
ENTRY MONTH: 199509
ENTRY DATE: Entered STN: 19950930
Last Updated on STN: 20000303
Entered Medline: 19950918

AB Restriction fragment length polymorphisms (RFLPs) of two **hemagglutinin** loci were analyzed in 36 Porphyromonas **gingivalis** isolates from human and monkey origins using portions of **hagA** and hagB as probes. The P. **gingivalis** strains were differentiated into 9 RFLP groups based on the heterogeneity of the **hagA** locus and 10 different groups based on hybridization with hagB. Homology to **hagA** was detected in all human derived and all but three monkey derived strains. All P. **gingivalis** isolates exhibited DNA homologous to hagB. Multiple alleles of the **hemagglutinin** genes were detected for most P. **gingivalis** strains. No DNA homologous to either **hemagglutinin** gene could be detected in 6 other bacterial species tested. Serotyping and **hemagglutination** titers of each P. **gingivalis** isolate were obtained in an attempt to establish a correlation between these pheno-typic parameters and RFLP group. Although no correlations were found with these parameters, a correlation between RFLP group and invasiveness in the mouse abscess model was noted.

L7 ANSWER 20 OF 38 MEDLINE DUPLICATE 14
ACCESSION NUMBER: 94222526 MEDLINE
DOCUMENT NUMBER: 94222526 PubMed ID: 8168925
TITLE: Systemic and mucosal immune responses in mice orally immunized with avirulent Salmonella typhimurium expressing a cloned Porphyromonas **gingivalis** **hemagglutinin**.
AUTHOR: Dusek D M; **Progulske-Fox A**; Brown T A
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville 32610.
CONTRACT NUMBER: DE 07117 (NIDCR)
DE 07496 (NIDCR)
RCDA DE 00236 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1994 May) 62 (5) 1652-7.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199406
ENTRY DATE: Entered STN: 19940613
Last Updated on STN: 20000303
Entered Medline: 19940602

AB Porphyromonas **gingivalis** produces a variety of virulence factors that may have a function in the periodontal disease process. Determination of the role of these various factors in pathogenesis and identification of a means for protecting the host from the destructive effects of this organism are areas of vigorous investigation. In this study we demonstrate the potential of avirulent Salmonella typhimurium strains to stimulate a specific systemic and mucosal immune response to a cloned P. **gingivalis** **hemagglutinin** (HagB). An avirulent strain of S. typhimurium, chi 4072, expressing the hagB gene of P. **gingivalis** 381 on the plasmid pDMD1 was intragastrically administered to BALB/c mice. These mice mounted a serum immunoglobulin G (IgG) and IgA primary response against the hagB gene product and a mucosal immune response as measured by evaluation of saliva. IgA antibodies were also detected in bile. These results demonstrate the feasibility of using attenuated S. typhimurium strains as carriers of P. **gingivalis** virulence factors for subsequent evaluation of the systemic and mucosal immune response against these antigens. This system will provide a means for evaluating the virulence factors of P. **gingivalis** for their suitability in the construction of potential vaccines.

L7 ANSWER 21 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:330724 BIOSIS
DOCUMENT NUMBER: PREV199497343724
TITLE: Interactions of Porphyromonas **gingivalis** with oral epithelial cells.
AUTHOR(S): Emory, S. (1); Duncan, M.; Lepine, G.; Han, N.; **Progulske-Fox, A.**
CORPORATE SOURCE: (1) Forsyth Dental Center, Boston, MA USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1994) Vol. 94, No. 0, pp. 116.
Meeting Info.: 94th General Meeting of the American Society for Microbiology Las Vegas, Nevada, USA May 23-27, 1994
ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 22 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:87296 BIOSIS
DOCUMENT NUMBER: PREV199497100296
TITLE: Molecular biology.
AUTHOR(S): Lepine, Guylaine (1); **Progulske-Fox, Ann**

CORPORATE SOURCE: (1) Dep. Oral Biology, Univ. Fla., Gainesville, FL USA
SOURCE: Shah, H. N. [Editor]. (1993) pp. 293-319. Biology of the species Porphyromonas gingivalis.
Publisher: CRC Press, Inc. Boca Raton, Florida, USA.
ISBN: 0-8493-6648-8.
DOCUMENT TYPE: Book
LANGUAGE: English

L7 ANSWER 23 OF 38 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 93162835 MEDLINE
DOCUMENT NUMBER: 93162835 PubMed ID: 8381773
TITLE: Isolation and characterization of a cloned Porphyromonas **gingivalis hemagglutinin** from an avirulent strain of Salmonella typhimurium.
AUTHOR: Dusek D M; **Progulske-Fox A**; Whitlock J; Brown T A
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville 32610.
CONTRACT NUMBER: DE 00236 (NIDCR)
DE 07496 (NIDCR)
DE07117 (NIDCR)
SOURCE: INFECTION AND IMMUNITY, (1993 Mar) 61 (3) 940-6.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199303
ENTRY DATE: Entered STN: 19930402
Last Updated on STN: 20000303
Entered Medline: 19930318
AB Identification of surface macromolecules of Porphyromonas **gingivalis** that act as virulence factors in periodontal disease has important implications for studying host-parasite interactions as well as for potential vaccine development. The objective of this study was to determine whether a cloned, P. **gingivalis hemagglutinin** gene could be expressed in an intact form in an avirulent Salmonella typhimurium vaccine construct and to characterize the recombinant protein. The recombinant protein was purified from the vaccine strain, characterized, and tested for biological activity as a competitive inhibitor of **hemagglutination**. Cells of S. typhimurium SL3261/pST7 grown in Luria broth were broken by sonic disruption and fractionated. The purified recombinant protein was found to inhibit **hemagglutination** of erythrocytes by whole P. **gingivalis** cells. The same purified protein was analyzed for its N-terminal amino acid sequence and amino acid composition and found to match that predicted from the nucleotide sequence of the cloned gene. These results indicate that a surface macromolecule of P. **gingivalis** can be expressed in an intact and biologically active form in a Salmonella carrier strain.

L7 ANSWER 24 OF 38 MEDLINE DUPLICATE 16
ACCESSION NUMBER: 94087471 MEDLINE
DOCUMENT NUMBER: 94087471 PubMed ID: 8263716
TITLE: Molecular characterization of **hemagglutinin** genes of periodontopathic bacteria.
AUTHOR: **Progulske-Fox A**; Rao V; Han N; Lepine G; Witlock J; Lantz M
CORPORATE SOURCE: Department of Oral Biology, University of Florida, Gainesville 32610-0424.
SOURCE: JOURNAL OF PERIODONTAL RESEARCH, (1993 Nov) 28 (6 Pt 2) 473-4.
Journal code: 0055107. ISSN: 0022-3484.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199401
ENTRY DATE: Entered STN: 19940209
Last Updated on STN: 19990129
Entered Medline: 19940121

L7 ANSWER 25 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:201532 BIOSIS
DOCUMENT NUMBER: PREV199344097782
TITLE: DNA sequence analysis of a gene encoding a putative fibrinogen and fibronectin binding protein from Porphyromonas **gingivalis**.
AUTHOR(S): Han, N. (1); Whitlock, J.; Patti, J. M.; Lantz, M. S.; **Progulske-Fox, A.**
CORPORATE SOURCE: (1) Univ. Fla., Gainesville, FL USA
SOURCE: Journal of Dental Research, (1993) Vol. 72, No. ABSTR. SPEC. ISSUE, pp. 156.
Meeting Info.: Joint Meeting of the International Association for Dental Research, the American Association of Dental Research and the Canadian Association of Dental Research Chicago, Illinois, USA March 10-14, 1993
ISSN: 0022-0345.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 26 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:201335 BIOSIS
DOCUMENT NUMBER: PREV199344097585
TITLE: Isogenic mutations in two **hemagglutinin** genes of Porphyromonas **gingivalis**.
AUTHOR(S): Lepine, G.; **Progulske-Fox, A.**
CORPORATE SOURCE: Dep. Oral Biol., Univ. Fla., Gainesville, FL USA
SOURCE: Journal of Dental Research, (1993) Vol. 72, No. ABSTR. SPEC. ISSUE, pp. 118.
Meeting Info.: Joint Meeting of the International Association for Dental Research, the American Association of Dental Research and the Canadian Association of Dental Research Chicago, Illinois, USA March 10-14, 1993
ISSN: 0022-0345.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 27 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:357458 BIOSIS
DOCUMENT NUMBER: PREV199345040883
TITLE: Cloning and characterization of a third Porphyromonas **gingivalis hemagglutinin** gene.
AUTHOR(S): Lepine, G.; **Progulske-Fox, A.**
CORPORATE SOURCE: Univ. Fla., Gainesville, FL USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1993) Vol. 93, No. 0, pp. 116.
Meeting Info.: 93rd General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 16-20, 1993
ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 28 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1993:357454 BIOSIS
DOCUMENT NUMBER: PREV199345040879
TITLE: Serotype and **hemagglutination** titers of Porphyromonas **gingivalis**.
AUTHOR(S): Savett, D. A.; Lepine, G.; **Progulske-Fox, A.**
CORPORATE SOURCE: Univ. Fla., Gainesville, FL USA

SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1993) Vol. 93, No. 0, pp. 115. Meeting Info.: 93rd General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 16-20, 1993 ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 29 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1992:401937 BIOSIS
DOCUMENT NUMBER: BR43:57812
TITLE: IMMUNE RESPONSE OF MICE ORALLY IMMUNIZED WITH CLONED PORPHYROMONAS-**GINGIVALIS HEMAGGLUTININ**.
AUTHOR(S): DUSEK D M; **PROGULSKE-FOX A**; BROWN T A
CORPORATE SOURCE: DEP. ORAL BIOL., UNIV. FLA., GAINESVILLE, FLA.
SOURCE: JOINT MEETING OF THE 70TH GENERAL MEETING OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH (IADR), 40TH ANNUAL MEETING OF THE BRITISH DIVISION OF THE IADR, 1992 ANNUAL MEETING OF THE CONTINENTAL EUROPEAN DIVISION OF THE IADR, 8TH ANNUAL MEETING OF THE IRISH DIVISION OF THE IADR, AND THE 75TH ANNUAL MEETING OF THE SCANDINAVIAN ASSOCIATION FOR DENTAL RESEARCH, GLASGOW, SCOTLAND, UK, JULY 1-4, 1992. J DENT RES, (1992) 71 (SPEC ISSUE), 756. CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 30 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1992:382047 BIOSIS
DOCUMENT NUMBER: BR43:48997
TITLE: NUCLEIC ACID SEQUENCE ANALYSIS OF GENES ENCODING **HEMAGGLUTININ** AND FIBRINOGEN BINDING ACTIVITIES OF PORPHYROMONAS-**GINGIVALIS**.
AUTHOR(S): HAN N; WHITLOCK J; PATTI J M; LANTZ M S; **PROGULSKE-FOX A**
CORPORATE SOURCE: UNIV. FLA., GAINESVILLE, FLA.
SOURCE: JOINT MEETING OF THE 70TH GENERAL MEETING OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH (IADR), 40TH ANNUAL MEETING OF THE BRITISH DIVISION OF THE IADR, 1992 ANNUAL MEETING OF THE CONTINENTAL EUROPEAN DIVISION OF THE IADR, 8TH ANNUAL MEETING OF THE IRISH DIVISION OF THE IADR AND THE 75TH ANNUAL MEETING OF THE SCANDINAVIAN ASSOCIATION FOR DENTAL RESEARCH, GLASGOW, SCOTLAND, UK, JULY 1-4, 1992. J DENT RES, (1992) 71 (SPEC ISSUE), 530. CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 31 OF 38 MEDLINE DUPLICATE 17
ACCESSION NUMBER: 92219240 MEDLINE
DOCUMENT NUMBER: 92219240 PubMed ID: 1313881
TITLE: Evidence for independent molecular identity and functional interaction of the haemagglutinin and cysteine proteinase (gingivain) of Porphyromonas **gingivalis**.
AUTHOR: Shah H N; Gharbia S E; **Progulske-Fox A**; Brocklehurst K
CORPORATE SOURCE: Department of Oral Microbiology, London Hospital Medical College, University of London, Whitechapel.
SOURCE: JOURNAL OF MEDICAL MICROBIOLOGY, (1992 Apr) 36 (4) 239-44. Journal code: 0224131. ISSN: 0022-2615.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199205
ENTRY DATE: Entered STN: 19920529
Last Updated on STN: 20000303
Entered Medline: 19920514

AB The sequence of events involved in haemagglutination and lysis of erythrocytes by washed cells, vesicles and the culture supernate of Porphyromonas **gingivalis** strain W83 was monitored by 51Cr release and transmission electronmicroscopy. All preparations, except capsular material and lipopolysaccharide, caused haemagglutination and, by a slow process of attachment and specific attack on the surface structures of the red blood cells, produced minute pores and eventual leakage of cellular contents. N-acetylglucosamine, N-acetylgalactosamine and several other sugars such as glucose and sucrose had no effect on haemagglutination. Antiserum raised against a cloned haemagglutinin of P. **gingivalis** strain 381 inhibited the activity of strain W83 cells, vesicles and supernate. The antiserum-neutralised supernate lost 70-80% of its hydrolytic activity towards alpha-N-benzoyl-L-arginine-4-nitroanilide but the residual activity behaved in a manner similar to the native supernate in that it was completely inhibited by the addition of 2,2'-dipyridyl disulphide and was fully restored upon addition of a low-Mr mercaptan. Binding of the antiserum to the haemagglutinin epitope of P. **gingivalis** still permitted titration of the active centre cysteinyl thiol group of the proteinase. Purified gingivain caused lysis of erythrocytes and was not neutralised by antiserum to the haemagglutinin. These results suggest that, although the haemagglutinin and gingivain are probably separate molecules, they are closely associated on the outer membrane of P. **gingivalis** and may be functionally related.

L7 ANSWER 32 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1991:241745 BIOSIS
DOCUMENT NUMBER: BR40:115910
TITLE: OCCURRENCE OF PORPHYROMONAS-**GINGIVALIS** 381 **HEMAGGLUTININ** GENES IN OTHER PORPHYROMONAS-**GINGIVALIS** STRAINS AND ORAL BACTERIAL SPECIES.
AUTHOR(S): LEPINE G; **PROGULSKE-FOX A**
CORPORATE SOURCE: DEP. ORAL BIOL., UNIV. FLA., GAINESVILLE, FLA.
SOURCE: 69TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH, 20TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, AND THE 12TH ANNUAL SESSION OF THE MEXICAN DIVISION OF THE IADR (INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH), ACAPULCO, MEXICO, APRIL 17-21, 1991. J DENT RES, (1991) 70 (SPEC ISSUE APRIL), 582. CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 33 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1991:240846 BIOSIS
DOCUMENT NUMBER: BR40:115011
TITLE: PURIFICATION AND CHARACTERIZATION OF A PUTATIVE **HEMAGGLUTININ** OF PORPHYROMONAS-**GINGIVALIS**
AUTHOR(S): DUSEK D M; WHITLOCK J; **PROGULSKE-FOX A**; BROWN T A
CORPORATE SOURCE: UNIV. FLA., USA.
SOURCE: 69TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH, 20TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, AND THE 12TH ANNUAL SESSION OF THE MEXICAN DIVISION OF THE IADR (INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH), ACAPULCO, MEXICO, APRIL 17-21, 1991. J DENT RES, (1991) 70 (SPEC ISSUE APRIL), 437.

CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 34 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1990:365437 BIOSIS
DOCUMENT NUMBER: BR39:49913
TITLE: THE CLONING AND CHARACTERIZATION OF A SECOND PORPHYROMONAS-**GINGIVALIS HEMAGGLUTININ** GENE.
AUTHOR(S): TUMWASORN S; LEPINE G; AVAMPATO J; BANAS J; SAVETT D; **PROGULSKE-FOX A**
CORPORATE SOURCE: UNIV. FLA., GAINESVILLE, FLA.
SOURCE: 90TH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY 1990, ANAHEIM, CALIFORNIA, USA, MAY 13-17, 1990. ABSTR ANNU MEET AM SOC MICROBIOL, (1990) 90 (0), 93. CODEN: ASMACK. ISSN: 0094-8519.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 35 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1989:259325 BIOSIS
DOCUMENT NUMBER: BR36:126549
TITLE: IDENTIFICATION OF ANTIGENS OF BACTEROIDES-**GINGIVALIS** WHICH HAVE **HEMAGGLUTINATION** ACTIVITY.
AUTHOR(S): SAVETT D; AVAMPATO J; MOORE L; **PROGULSKE-FOX A**
CORPORATE SOURCE: UNIV. FLA., GAINESVILLE, FLA.
SOURCE: 18TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, SAN FRANCISCO, CALIFORNIA, USA, MARCH 15-19, 1989. J DENT RES, (1989) 68 (SPEC ISSUE), 356. CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 36 OF 38 MEDLINE DUPLICATE 18
ACCESSION NUMBER: 90310556 MEDLINE
DOCUMENT NUMBER: 90310556 PubMed ID: 2700777
TITLE: The expression and function of a Bacteroides **gingivalis hemagglutinin** gene in Escherichia coli.
AUTHOR: **Progulske-Fox A**; Tumwasorn S; Holt S C
SOURCE: ORAL MICROBIOLOGY AND IMMUNOLOGY, (1989 Sep) 4 (3) 121-31. Journal code: 8707451. ISSN: 0902-0055.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals
ENTRY MONTH: 199008
ENTRY DATE: Entered STN: 19900921
Last Updated on STN: 19900921
Entered Medline: 19900813

AB Eight Escherichia coli JM 109 transformants generated from a clone bank of Bacteroides **gingivalis** 381 genomic DNA, were found to express B. **gingivalis** antigens. Quantitation of antigen expression by ELISA indicated that isopropyl-beta-D-thiogalactopyranoside (IPTG) was not necessary for antigen expression for any of the clones but that expression in 2 of the clones, ST 2 and ST 3, was increased in cells grown in the presence of IPTG. Western blot analysis revealed that the expressed protein of clone ST 2 has a molecular weight of 125,000 Dal. and that clone ST 3 contains multiple bands of 30 to 50 kdal which react with the anti-B. **gingivalis** antiserum. Three of the transformants were

found to agglutinate sheep erythrocytes. Polyclonal monospecific antiserum to one of the transformants, clone ST 2, was found to react to 2 major bands of MWs 43,000 and 38,000 and minor bands of 115,000, 105,000, 32,000, and 30,000 Dal. present in B. **gingivalis** cell lysate preparations. Adsorption of anti B. **gingivalis** antiserum with cells of clone ST 2 reduced the **hemagglutination** inhibition activity of the antiserum 4-fold whereas antiserum to the clone itself inhibited B. **gingivalis hemagglutination** at a titer of 8 times that of normal rabbit serum. Immunoelectronmicroscopic studies using the antiserum to clone ST 2 indicate that the product of the cloned gene (**hemagglutinin**) is located on the B. **gingivalis** cell surface. A restriction map generated of the cloned B. **gingivalis** DNA fragment confirms the insert to be 3.2 kbases and indicates the possibility of a repeated sequence in the fragment.

L7 ANSWER 37 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1988:260098 BIOSIS
DOCUMENT NUMBER: BR34:131128
TITLE: EXPRESSION OF BACTEROIDES-**GINGIVALIS** **HEMAGGLUTININS** IN ESCHERICHIA-COLI.
AUTHOR(S): TUMWASORN S; **PROGULSKE A**
CORPORATE SOURCE: DEP. ORAL BIOL., PERIODONTAL DIS. RES. CENT., UNIV. FLORIDA, GAINESVILLE, FLA.
SOURCE: 66TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH, 17TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, AND 12TH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR DENTAL RESEARCH, MONTREAL, QUEBEC, CANADA, MARCH 9-13, 1988. J DENT RES, (1988) 67 (SPEC ISSUE MAR), 368.
CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L7 ANSWER 38 OF 38 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1988:342577 BIOSIS
DOCUMENT NUMBER: BR35:37419
TITLE: THE EXPRESSION OF A BACTEROIDES-**GINGIVALIS** **HEMAGGLUTININ** GENE IN ESCHERICHIA-COLI.
AUTHOR(S): TUMWASORN S; AVAMPATO J; SAVETT D; HOLT S C; **PROGULSKE A**
CORPORATE SOURCE: UNIV. TEXAS, SAN ANTONIO, TEX.
SOURCE: ANNUAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, MIAMI BEACH, FLORIDA, USA, MAY 8-13, 1988. ABSTR ANNU MEET AM SOC MICROBIOL, (1988) 88 (0), 94.
CODEN: ASMACK. ISSN: 0094-8519.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

WEST Search History

DATE: Tuesday, March 04, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L47	l44 and (protease or proteoly$)	35	L47
L46	L43 and (bacterium or bacteria).ab.	0	L46
L45	l43 and bacteri$.ti.	0	L45
L44	L43 and (bacterium or bacteria)	52	L44
L43	l29 and ($carcinoma or melanoma or sarcoma or cancer$ or neoplas$ or tumor$ or metast$).clm.	118	L43
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR			
L42	L41 and (bacteri$)	154	L42
L41	l29 and ($carcinoma or melanoma or sarcoma or cancer$ or neoplas$ or tumor$ or metast$).clm.	226	L41
L40	l22 and ($carcinoma or melanoma or sarcoma or cancer$ or neoplas$ or tumor$ or metast$).clm.	17	L40
L39	L38 and ($carcinoma or melanoma or sarcoma or cancer$ or neoplas$ or tumor$ or metast$)	0	L39
L38	5830710.pn.	2	L38
L37	(Prtp or dentilisin).ab.	8	L37
L36	L35 and (l24 or l8)	2	L36
L35	gingipains.ab.	19	L35
L34	L33 and (l8 or l24)	40	L34
L33	((424/197.11)!.CCLS.)	286	L33
L32	L30 and (bacter$).ab.	12	L32
L31	L30 and l9	1	L31
L30	L29 and (l24 or l8)	300	L30
L29	((424/94.1 |424/94.2 |424/94.21 |424/94.3 |424/94.4 |424/94.5 |424/94.6 |424/94.61 |424/94.62 |424/94.63 |424/94.64 |424/94.65 |424/94.66 |424/94.67)!.CCLS.)	2936	L29
L28	L27 and (l24 or l8)	0	L28
L27	L26 and bacter$.ab.	51	L27
L26	((424/94.1)!.CCLS.)	683	L26
L25	L24 and l22	1	L25
L24	(angiogen$ or antiangiogen$ or neovas$)	14274	L24
L23	L22 and l8	15	L23
L22	((424/190.1)!.CCLS.)	401	L22
L21	L20 and (bacteri$).ab.	645	L21
L20	enzyme.ab. and l8	4966	L20

L19	L18 and l8	0	L19
L18	(protease adj bacterium).ab.	11	L18
L17	L16 and l8	0	L17
L16	("bacterial protease").ab.	82	L16
L15	L13 and (angiogen$ or antiangiogen$ or neovas$)	5	L15
L14	L13 and gingivalis	0	L14
L13	L12 and @py<=2001	101	L13
L12	L11 and (bacterium or bacterial).ab.	126	L12
L11	l8 and (protease or aminopept$).ab.	1400	L11
L10	l8 and l9	21	L10
L9	gingivalis	688	L9
L8	($carcinoma or melanoma or sarcoma or cancer$ or neoplas$ or tumor$ or metast$).ab.	88527	L8
L7	l6 and (angiogen$ or neovascul$ or angio$ or $carcinoma or cancer$ or neoplas$ or tumor$ or metast$)	2	L7
L6	(Kozarov-E$ or Progulske-A$ or Progulske-fox-a$).in.	8	L6
L5	l1 and (angiogen$ or neovascul$ or antiangio$)	21	L5
L4	l2 and ($carcinoma or cancer$ or neoplas$ or tumor$ or metast$).ab.	20	L4
L3	L2 and gingivalis	0	L3
L2	L1 and (angio$ or neovas$ or antiangio$).ab.	42	L2
L1	(bacter$).ab. and (protease or proteoly$).ab.	1977	L1

END OF SEARCH HISTORY